REMARKS

Allowable Subject

Claims 1, 2, 4, 5, 13 and 14 were found allowable in the March 21, 2002 Office Action because the claims are directed to isolated promoter sequences, and vectors comprising said promoter sequences, which are free of the art of record and satisfy all requirements of section 112.

Rejections of Claims and Traversal Thereof

In the March 21, 2003 Office Action,

claims 6-9 and 15-26 were rejected under 35 U.S.C. §112, first paragraph;

claims 7-9 were rejected under 35 U.S.C. §112, second paragraph; and

claim 10 was rejected under 35 U.S.C. §102(b) as being anticipated by Fulda, et al. (1997) *Cancer Research*, 57, 3823-3829.

The rejection of claims 6-10 and 15-26 is hereby traversed, and reconsideration of the patentability of the amended claims herein is requested, in light of the ensuing remarks.

Rejection under 35 USC §112, first paragraph

Claims 6-9 and 15-22 were rejected under 35 USC §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, has possession of the claimed invention. According to the Office,

> "the originally filed disclosure does not describe a method wherein an expression vector comprising the p53 binding region of the claims is introduced into a tumor cell and the cell is assayed for cell death."

Applicants vigorously disagree and make reference to several sections of text found in the present specification that applicants were in possession of the presently claimed invention at the time of filing. For example, at page 3 applicants discuss that "the p53 binding region according to the present invention may be present in a vector, and optionally in combination with a reporter DNA." Thus, it is quite evident that the expression vector does not have to contain a reporter DNA and one skilled in the art would understand that including the reporter DNA is merely another option that provides a different assay for determining the expression of the CD95 receptor DNA. As further stated at page 2, in the last paragraph, "the cloned CD95 receptor DNA fragments are inserted in DNA binding experiments which use cell extracts from the tumor cells," thereby providing further evidence of the inventors intent to insert the p53 binding region into a vector for introduction into a cell. The tumor cells are transfected with the expression vectors by a calcium phosphate coprecipipatation method, as described at page 11 of the specification.

In response to the statement by the Office that there is no disclosure for "the cell is assayed for cell death" the Office's attention is directed to page 9, section (B) wherein the tumor cells of section (A), that have been transfected with the vectors according to the present invention, were treated with a chemotherapeutic agent and the living cell fraction is determined. Applicants submit that determining the living cell fraction is certainly the equivalent of assaying cells for cell death. It is not necessary that the application describe the claim terms *ipsis verbis* to satisfy the written description requirement of section 112. Instead, the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question. *Fujikawa v. Wattansin*, 39 USPQ2d 1895 (Fed. Cir. 1996). Accordingly, one of ordinary skill in the art would readily understand that the applicants, at time of filing, were in possession of method steps that include introducing an expression vector comprising the p53 binding region of the claims into a tumor cell and the cell is assayed for cell death. It is well settled that adequate description under the first paragraph of 35 USC §112 does not require literal support for the claimed invention. Rather, it is sufficient if the originally filed disclosure would have conveyed to one having ordinary skill in the art that applicants had possession of what is claimed. *Ex parte Parks*, 30 USPQ 2d 1234, (BPAI 1993).

The Office listed the specific examples described in the present specification and then stated that the method steps as set forth in the claims are not in the specification and thus new matter. Applicants stress that all the claimed method steps are disclosed in the specification albeit not in the exact order

as described in the examples. The Office seems to be implying that applicants are required to show an exact example for each method claim when in fact examples are not even required by the statute and are not an end in themselves. *Amgen, Inc. v. Chugai Pharmaceutical Co.*, 18 USPQ 2d 1016 (Fed. Cir. 1991). One skilled in the art can easy understand that certain steps are interchangeable and can be used for different methods. Clearly, a skilled artisan reading and understanding applicants' disclosure would know that apoptosis is a determinable end point that occurs after the described cascade of biological events.

The Office bears the initial burden of presenting a *prima facie* case of unpatentability. *In re Oetiker,* 24 USPQ2d 1443 (Fed. Cir. 1992). Insofar as the written description requirement is concerned, that burden is discharged by "presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined in the claims." *In re Wetheim*, 191 USPQ 90, (C.C.P.A. 1976). In the present situation, the specification contains a description of the claimed invention, as shown above, and thus the Office, in order to meet the burden of proof, must provide reasons why one of ordinary skill in the art would not consider the description sufficient. *In re Alton*, 37 USPQ2d 1578 (Fed. Cir. 1996). The Office has not met this burden.

There is no infirmity in the applicant's claims under §112, first paragraph, written description requirements. Applicant's invention is directed to an assay used as a diagnosis or to test the effectiveness of a chemotherapeutic agent. One of ordinary skill in the art reading the instant specification would be compelled by such disclosure to the conclusion that applicants fully possessed the invention. The Examiner's contrary assertion that "the method steps as set forth in the amended and new claims do not appear anywhere in the original disclosure" is simply at fundamental odds with the clear and unambiguous disclosure of the specification.

Claims 6-9 and 15-22 are also rejected under 35 USC §112, first paragraph because the Office alleges that the claims contain subject matter which was not disclosed in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. According to the Office, "the promoter sequences themselves would have no influence on apoptosis." Applicants vigorously disagree because the specification clearly shows that the p53 binding region linked to the CD95 receptor DNA included in the vectors of the present invention does have an influence on apoptosis. As stated at page 2 of the specification, applicants

identified p53 binding regions in the promoter of CD95 receptor DNA whereat p53 binds to the p53 binding regions that in turn activate transcription of the CD95 receptor DNA. An effective chemotherapeutic agent causes the induction of p53 that initiates the cascade effect that eventually leads to the expression of the CD95 receptor that subsequently induces apoptosis. Further, the results compiled in Table 1 show that there is a correlation between a chemotherapeutic agent and apoptosis through a cascade of events that include interaction of p53 with the p53 binding regions of the present invention.

The disclosure is sufficient to enable those skilled in the art to practice the claimed invention, and the specification need not disclose what is well known in the art. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481 (Fed. Cir. 1984). Further it has been consistently held by the courts that the first paragraph of 35 USC §112 requires nothing more than objective enablement. In satisfying the enablement requirement, an application need not teach, and preferably omits, that which is well-know in the art. The error of the Office's approach is that he requires the specification to be a blueprint for applicant's claimed invention. However, the law does not require a specification to be a blueprint in order to satisfy the requirement for enablement under 35 USC §112, first paragraph as stated by this Board in *Staehelin v. Secher*, 24 USPQ2d 1513 (B.P.A.I. 1992) citing *In re Gay*, 135 USPQ 311 (C.C.P.A. 1962) "Not every last detail is to be described, else patent specifications would turn into production specifications, which they were never intended to be." It is well settled in the law that a specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as in compliance with the enabling requirement of the first paragraph of Section 112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. The Office has not provided any evidence that one of ordinary skill in the art would doubt the objective truth of the statements contained in applicants' disclosure or that the cascade of events leading to apoptosis that includes DNA damage caused by a chemotherapeutic agent which in turn induces p53 and the binding of p53 to the p53 binding regions of the present invention with subsequent expression of CD95 receptor leading to apoptosis , and thus, all claims as now amended meet the requirements under 35 U.S.C. §112, first paragraph.

Rejection under 35 USC §112, second paragraph

Claims 7-9 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants have amended claim 6 and cancelled claim 7 and 9 thereby obviating this rejection and respectfully request that the rejection under 35 U.S.C. §112, second paragraph be withdrawn.

Rejection under 35 USC §102(b)

Claim 10 was rejected under 35 U.S.C. §102(b) as being anticipated by Fulda, et al. (1997) *Cancer Research*, 57, 3823-3829. Claim 10, as now amended, recites steps and limitations not disclosed in Fulda, et al., and as such, amended claim 10 is not anticipated by Fulda, et al. Applicants request that the rejection under 35 U.S.C. §102(b) be withdrawn.

Conclusion

Applicants have satisfied all the requirements for patentability. All pending claims are free of the art and fully comply with the requirements of 35 U.S.C. §112. It therefore is requested that Examiner Sullivan reconsider the patentability of claims 6, 8, 10, 11, 15, 17, 18 and 20 in light of the distinguishing remarks herein and withdraw all rejections, thereby placing the application in condition for allowance. Notice of the same is earnestly solicited. In the event that any issues remain, Examiner Sullivan is requested to contact the undersigned attorney at (919) 419-9350 to resolve same.

Respectfully submitted,

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